

**REMARKS**

The outstanding Office Action deals with Claims 1-32. This amendment amends Claim 1; and cancels Claims 2-12, 14-17, and 32. Accordingly, Claims 1, 13, and 18-31 remain for further consideration.

Applicants respectfully request reconsideration and withdrawal of the rejections as to the pending claims.

***Telephone Interview with Examiner Bernatz:***

Applicants' counsel would like to thank Examiner Bernatz for his courtesy during a short telephone interview on June 22, 2005. During that interview, Mr. Bernatz was asked whether an amendment would be considered that introduces subject matter into the independent claim where that subject matter originates in a claim withdrawn from consideration due a prior species restriction requirement. Mr. Bernatz indicated that such an amendment would be considered in the pending application.

***The Rejection Under 35 U.S.C. § 112, ¶1:***

Claims 1, 13, 19-20, and 29-31 presently stand rejected under 35 U.S.C. §112, ¶1.

The Office Action asserts that even though the specification is enabling for specific materials of magnetic layers capable of meeting the claimed functional/intended use limitations, the specification does not reasonably provide enablement for any conceivable combination of magnetic layers either presently

existing, or which might be discovered in the future, and which would impart the desired characteristics.

***Response:***

Applicants respectfully traverse this rejection. The claims have been amended the result of which should render this rejection moot.

In the first instance, enablement is a question of law. *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1268 (Fed. Cir. 1984). The enablement requirement of section 112 is met if the description enables any mode of making and using the claimed invention. *Engel Industries, inc. v. Lockformer Co.*, 946 F.2d 1528, 1533 (Fed. Cir. 1991). To similar effect, it is sufficient for enablement that the patents disclose at least one means that would enable a person of ordinary skill in the art to make and use the claimed inventions. *Spectra-Physics Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1533 (Fed. Cir. 1987).

Here, the Office Action admits that the specification is enabling for “specific materials of the magnetic layers capable of meeting the claimed functional/intended use limitations”. Thus, the Office Action concedes that the specification is enabling for those specific materials. That is all that the law requires. Accordingly, the rejection based on 35 U.S.C. § 112, ¶1, is legally wrong and must be withdrawn.

***The Rejection Based on 35 U.S.C. § 112, ¶2:***

Claims 1, 13, and 17-31 presently stand rejected under 35 U.S.C. § 112, ¶2, on the ground that the phrase “formed of materials that compensate the different physical/magnetic properties” in original Claim 1 is a limitation where “merely

recite[s] what a product will do” and has been held to be indefinite. In addition, the Office Action objected to use of certain relative terms as the basis for indefiniteness.

According to the Office Action, use of the phrase “have lattice matching structures” supports a rejection of Claim 31.

***Response:***

Neither Claim 1 nor Claim 31 now includes the phrase on which the rejection was predicated. Accordingly, the rejection of Claims 1 and 31 on the basis of section 112, ¶2, now lacks foundation and must be withdrawn.

***The Anticipation Rejections Based on the Kikitsu et al. Patent:***

Claims 1, 13, 17-20, and 28-31 presently stand rejected as being anticipated by the Kikitsu et al. document (U.S. Patent App. No. 2001/0051287) within the meaning of 35 U.S.C. § 102(b) and/or (e).

The rejection argues that example 13 of Kikitsu et al. discloses a perpendicular magnetic recording medium comprising at least a first and a second perpendicular magnetic recording layer, and a substrate supporting the first and second perpendicular magnetic recording layers, wherein the first and second perpendicular recording layers have different physical/magnetic properties and are formed of materials that compensate the different physical/magnetic properties. Moreover, the Office Action argues that the Kikitsu et al. patent (specifically paragraph 0085 and Example 13) discloses layers meeting the claimed limitations of Claim 10.

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***Response:***

Turning now to the publication itself, Example 13 of the Kikitsu et al. publication makes specific reference to Fig. 21 of that patent. Paragraphs 0191-0192 of the Kikitsu et al. publication describe the structure of Fig. 21. In particular, a substrate 101 supports, in order, an underlayer 102, a functional layer of magnetic material 103, a recording layer 104, and a protective layer 105. That arrangement of layers is beneath a recording head 22. The magnetic anisotropic energy  $K_u$  for the recording layer 104 is greater than  $K_u$  for the functional layer 103.

Thus, the Kikitsu et al. publication does not disclose first and second perpendicular magnetic recording layers. A fortiori, Kikitsu et al. do not disclose first and second perpendicular magnetic recording layers having crystalline structures. Furthermore, the Kikitsu et al. publication does not teach one perpendicular magnetic layer having smaller crystal grains and lower perpendicular magnetic anisotropic energy than those of a second perpendicular magnetic layer.

Claim 1 recites first and second perpendicular magnetic recording layers supported on a substrate, where "the first and the second perpendicular magnetic recording layers have crystalline structures and the first perpendicular magnetic recording layer has smaller crystal grains and lower perpendicular magnetic anisotropic energy ( $K_u$ ) than the second perpendicular magnetic recording layer."

Considering that the Kikitsu et al. publication fails to teach (i) two perpendicular magnetic recording layers, (ii) perpendicular magnetic recording layers with different crystal grains, and (iii) perpendicular magnetic recording layers with different  $K_u$  values, Applicants respectfully submit that Claim 1 is not anticipated by the Kikitsu et al. publication. Furthermore, since the Kikitsu et al. publication fails to

disclose two perpendicular magnetic recording layers, Claim 1 with its additional conditions would not be obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. § 103.

Accordingly, Applicants respectfully submit that Claim 1 is not anticipated by the Kikitsu et al. publication.

***The Anticipation Rejection Based on the Ikeda et al. Patent:***

Claims 1, 2, 8-10, 13, 17-20, 22-25, and 27-31 also stand rejected under 35 U.S.C. § 102(a) and/or (e) as anticipated by the Ikeda et al. patent (U.S. Patent No, 6,468,670).

The Office Action points to Fig. 1 of the Ikeda et al patent and argues that the patent discloses a perpendicular magnetic recording medium comprising at least a first and second perpendicular magnetic recording layer, and a substrate supporting the first and second perpendicular magnetic recording layers – with the first and second recording layers having different physical/magnetic properties and being formed of materials that compensate for those different properties – with particular reference to Col. 3, lines 6-20. The rejection further argues that Ikeda et al. disclosure the claimed limitations of Claim 10 at Col. 3, lines 6-65 and Col. 4, line 66 to Col. 5, line 35.

***Response:***

The Ikeda et al. patent discloses a magnetic recording disk with two distinct magnetic layers on a substrate with strong perpendicular magnetic anisotropy. The Ikeda et al. patent does not discuss either magnetic anisotropic energy or Ku. Moreover, the Ikeda et al. patent does not discuss relative size of crystal grains in the two layers, and does not associate smaller crystal grains and lower magnetic anisotropic energy in one layer as compared to another layer.

Those parameters are, however, part of Claim 1. Accordingly, Applicants respectfully submit that Claim 1 is not anticipated by the Ikeda et al. patent.

Furthermore, since the Ikeda et al. patent does not mention association of smaller crystal grains and lower magnetic anisotropic energy, Applicants submit that Claim 1 would not be obvious to one of ordinary skill in the art under 35 U.S.C. § 103 considering the Ikeda et al. patent.

***Claims 13 and 18-31 Are Allowable:***

Claims 13 and 18-31 depend from Claim 1 and are allowable therewith. In addition, each of these dependent claims adds additional features to the combination of Claim 1 such that there is a further and independent basis for allowance of each of these dependent claims.

***CONCLUSION:***


Accordingly, Applicants respectfully submit that the outstanding rejections have been overcome that all pending claims are in condition for allowance, and that a notice of allowance should be promptly issued.

Respectfully submitted,

**BUCHANAN INGERSOLL PC.**

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